AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1-5. (Cancelled)

6. (Previously Presented) A functional group-terminated vinyl polymer as obtainable by a production method, comprising

synthesizing an iodine atom-terminated vinyl polymer by the radical polymerization reaction of a vinyl monomer in the presence of an iodine compound and

introducing a functional group to the terminus by substituting a functional group-containing group for the terminal iodine atom of said vinyl polymer,

said iodine compound having a structure such that said iodine atom is bound to a carbon atom linked to an aromatic ring and

said radical polymerization reaction being carried out either by heating or by heating in the presence of a radical polymerization initiator.

7. (Previously Presented) The functional group-terminated vinyl polymer of Claim 6,

which has a number average molecular weight of 500 to 50,000 and a terminal functional group introduction rate of not less than 90%.

8. (Previously Presented) The functional group-terminated vinyl polymer of Claim 6, wherein said iodine compound has two or more iodine atoms.

9. (Previously Presented) The functional group-terminated vinyl polymer of Claim 8,

which has a number average molecular weight of 500 to 50,000 and a terminal functional group introduction rate of not less than 90%.

10. (Previously Presented) The functional group-terminated vinyl polymer of Claim 6, wherein said functional group is one or more functional groups selected from the group consisting of hydroxyl, amino, carboxyl, vinyl and silyl group.

11. (Previously Presented) The functional group-terminated vinyl polymer of Claim 10, which has a number average molecular weight of 500 to 50,000 and a terminal functional group introduction rate of not less than 90%.

12. (Previously Presented) A functional group-terminated vinyl polymer obtainable by a production method comprising:

synthesizing a halogen atom-terminated vinyl polymer by the radical polymerization reaction of a vinyl monomer in the presence of a halogen compound and

introducing a functional group to a terminus by substituting a functional group-containing group for the terminal halogen atom of said vinyl polymer,

said halogen compound having a structure such that said halogen atom is bound to a carbon atom linked to an aromatic ring and

said radical polymerization reaction being carried out either by light irradiation or light irradiation in the presence of a tin compound or a bismuth compound or by heating in the presence of a tin compound or a bismuth compound.

13 (Previously Presented) The functional group-terminated vinyl polymer of Claim 12, which has a number average molecular weight of 500 to 50,000 and a terminal functional group introduction rate of not less than 90%.

14. (Currently Amended) The functional group-terminated vinyl polymer of Claim 12, wherein said ~~iodine~~ halogen compound has two or more ~~iodine~~ halogen atoms.

15. (Previously Presented) The functional group-terminated vinyl polymer of Claim 14, which has a number average molecular weight of 500 to 50,000 and a terminal functional group introduction rate of not less than 90%.

16. (Previously Presented) The functional group-terminated vinyl polymer of Claim 12, wherein said functional group is one or more functional groups selected from the group consisting of hydroxyl, amino, carboxyl, vinyl and silyl group.

17. (Previously Presented) The functional group-terminated vinyl polymer of Claim 16, which has a number average molecular weight of 500 to 50,000 and a terminal functional group introduction rate of not less than 90%.

18. (New) A functional group-terminated vinyl polymer obtainable by a production method comprising:

synthesizing a halogen atom-terminated vinyl polymer by the radical polymerization reaction of a vinyl monomer in the presence of a halogen compound and

introducing a functional group to a terminus by substituting a functional group-containing group for the terminal halogen atom of said vinyl polymer,

said halogen compound having a structure such that said halogen atom is bound to a carbon atom linked to an aromatic ring and

said radical polymerization reaction being carried out either by light irradiation or light irradiation in the presence of a Group 14 to 16 metal compound or by heating in the presence of a Group 14 to 16 metal compound.

19. (New) The functional group-terminated vinyl polymer of Claim 18, which has a number average molecular weight of 500 to 50,000 and a terminal functional group introduction rate of not less than 90%.

20. (New) The functional group-terminated vinyl polymer of Claim 18, wherein said halogen compound has two or more halogen atoms.

21. (New) The functional group-terminated vinyl polymer of Claim 20,

which has a number average molecular weight of 500 to 50,000 and a terminal functional group introduction rate of not less than 90%.

22. (New) The functional group-terminated vinyl polymer of Claim 18,

wherein said functional group is one or more functional groups selected from the group consisting of hydroxyl, amino, carboxyl, vinyl and silyl group.

23. (New) The functional group-terminated vinyl polymer of Claim 22,

which has a number average molecular weight of 500 to 50,000 and a terminal functional group introduction rate of not less than 90%.